

REMARKS

Reconsideration and withdrawal of the rejections of the application are respectfully requested in view of the remarks herewith, which place the application into condition for allowance.

The Examiner is thanked for indicating in the Advisory Action that the objection to the claims, the 35 U.S.C. §112, second paragraph, rejections, and the prior art rejections based on Rombeck and Beyer would be overcome upon entrance of the June 7th Amendment, which the filing of the RCE accomplished. The remaining rejection from the Final Office Action—based on U.S. Patent 5,175,270 to Nilsen et al. under 35 U.S.C. §102—is addressed herein.

The Nilsen patent relates to the use polynucleotides, such as DNA, to build three-dimensional nucleic acid matrices consisting of successive layers of polynucleotides of a specific structure. The DNA matrices are made from layers of DNA and are used as reagents for assaying a variety of nucleic acid sequences. Each layer has a particular class of matrix monomers and the matrix monomers have the property that sequential addition of monomers yields a three-dimensional matrix. The matrix layer is selectively permeable to specific substances and may contain small matrix beads consisting of 4-6 cycles of matrix monomers.

The instant invention, by contrast, is directed to a linker molecule that has a nanoparticle bound thereto. According to claim 1, the linker molecule comprises at least one nucleic acid binding group covalently connected by a spacer group to at least one nanoparticle binding group. A nanoparticle is bound to the at least one nanoparticle binding group. The nanoparticle comprises a metal, and the metal, in turn, is selected from the group consisting of Fe, Co, Ni, Cu, Ru, Rh, Pd, Os, Ir, Pt, Ag, Au and combinations thereof.

The instantly claimed linker molecule is used, for example, to attach a metal nanoparticle to DNA. In a preferred embodiment, the attached nanoparticles are used as nucleating sites for an electroless plating process.

When comparing the Nilsen patent to Applicants' claims, however, the Nilsen patent fails to teach and enable each and every claimed element. For example, Nilsen fails to teach and enable: a nanoparticle bound to a nanoparticle binding group; the nanoparticle comprising a metal; and the metal selected from the group consisting of Fe, Co, Ni, Cu, Ru, Rh, Pd, Os, Ir, Pt, Ag, Au and combinations thereof. Instead, the Nilsen patent purportedly provides for spherical beads having 4-6 cycles of matrix monomers made from a single or a group of nucleic acid strands.

Clearly, there is no anticipatory overlap between the subject matter of the Nilsen patent and that which is claimed in the instant application. Further, as the elements of Applicants' claims are absent from the Nilsen patent, the Section 102 rejection must fail as a matter of law.

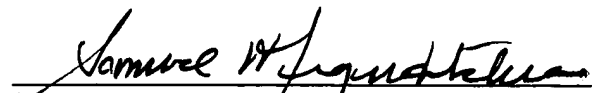
Consequently, reconsideration and withdrawal of the Section 102 rejection are respectfully requested.

CONCLUSION

In view of the foregoing, it is believed that all of the claims in this application are patentable, and early and favorable consideration thereof is solicited. The Examiner is invited to contact the undersigned if any remaining issues need to be addressed.

Respectfully submitted,
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